

Notice of Allowability

Application No.

10/782,782

Applicant(s)

LEE ET AL.

Examiner

Art Unit

Asok K. Sarkar

2891

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 1/26/2006.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Arguments

1. Applicant's explanation of the instant invention in pointing the difference with the cited prior art was found to be persuasive.

Allowable Subject Matter

2. Claims 1 – 20 are now allowed.
3. The following is an examiner's statement of reasons for allowance:

Claims 1 – 12 recite, inter alia, a method of forming a conductive pattern of a semiconductor device, comprising the steps of forming a conductive layer on a substrate such that the conductive layer protrudes above an upper surface of the substrate, forming a polishing protection layer on the substrate, including over the conductive layer, whereby the polishing protection layer presents a step between a portion of the polishing protection layer lying directly over the substrate and a portion of the polishing layer lying over the conductive layer, forming a step compensation layer on the polishing protection layer that reduces the step presented by the polishing protection layer, removing portions of the step compensation layer and the polishing protection layer to expose the conductive layer and etching away part of the exposed conductive layer to form a conductive pattern on the substrate. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claims 13 – 20 recite, inter alia, a method of manufacturing a non-volatile semiconductor memory device comprising the steps of forming a conductive layer over a floating gate structure on a substrate, forming a polishing protection layer on the conductive layer, forming a step compensation layer on the polishing protection layer and removing portions of the step compensation layer and the polishing protection layer to expose the conductive layer. Chern, US 6,706,592 teaches a method of manufacturing a non – volatile semiconductor memory device, but he fails to teach forming a step compensation layer on the polishing protection layer formed on the conductive layer. Additionally, the art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asok K. Sarkar whose telephone number is 571 272 1970. The examiner can normally be reached on Monday - Friday (8 AM- 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William B. Baumeister can be reached on 571 272 1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Asok K. Sarkar
February 27, 2006

Primary Examiner